

MICROALLOYED STEEL

Element	C	Si	Mn	V	Al
Chemical Composition (in % by weight)	0.21	0.60	1.43	0.10	0.02

(Standard analysis)

Applications

- Earthquake resistance
- Heavily reinforced structural elements
- Precast concrete elements
- Supports

Labelling

Top700 high-strength reinforcing steel is labeled with the Swiss Steel mark ("country-code 2, no. 19") and the product name "Top700".

Approval

Top700 high-strength reinforcing steel is listed in the "Register normkonformer Betonstähle" [Swiss Code for Structural Concrete] as number 3.5 and thus meets the requirements of the SIA 262 standard.

Physical properties

Density in kg/dm ³	Magnetizability	Thermal conductivity At 20°C in W/(m K)	Young's modulus in GPa at 20°C	Mean thermal expansion coefficient in 10-6K-1 bei 20°C-100°C
7.85	yes	25	205	10

Mechanical properties

Yield strength f_{sk}	Ratio $(f_t / f_s)_k$	Elongation under max. load ϵ_{uk}
[N/mm ²]	[-]	[%]
≥ 700	≥ 1.08	≥ 5.0

Top700 complies with B700B reinforcing steel pursuant to SIA 262.

HIGHER STRENGTH REINFORCING STEEL

Top700 is characterized by a yield strength of $> 700 \text{ N/mm}^2$. Top700 is 40% stronger than conventional reinforcing steel. Despite its high strength, Top700 meets all the requirements of ductility class B and the standard SIA 262.

These properties make Top700 suitable for applications in which the amount of reinforcing steel used in concrete is to be reduced or particularly high strength is required or in which the final structure is to be earthquake-proof.

Top700 is particularly suitable for highly reinforced structural components. By utilizing the material's higher strength, the total amount of steel can be reduced and it is much easier to comply with the maximum amount of steel required in components. Using this material, designs in construction can be slimmer and streamlined to make the best use of available space. The amount of work and time required at the construction site or in prefabrication can also be reduced by using less steel.

Delivery options

Steel bar	Ø 26 / 30 / 34 / 40 mm
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Tips for project engineers

For the verification of serviceability as well as for the requirements of the standard SIA 262 must be observed and, if necessary, adapted. This concerns, for example, deflections, anchorage lengths and deflections. Top700 is demonstrably suitable for welding. It can be welded well and safely using the usual safely by the usual welding methods. The characteristic mechanical properties remain unchanged when properly welded.

Handling

Like conventional reinforcing steel, no special handling is required on the construction site.

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For further info on our product range of tool steel, stainless steel and Engineering steel please visit www.swisssteelgroup.com

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